

UMA R. KARMARKAR

Harvard Business School
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Academic and Employment History

Assistant Professor, July 2011-present
Marketing Unit, Harvard Business School
Center for Brain Science (Affiliate), Harvard University

Ph.D., Consumer Behavior, June 2011
Graduate School of Business, Stanford University
Advisor : Baba Shiv

FMRI Visiting Fellowship Program, 2007
MGH/Harvard, Charlestown, MA

Postdoctoral Fellow 2004-06
HW Neuroscience Institute, University of California Berkeley
Advisor : Yang Dan

Ph.D., Neuroscience, June 2004
University of California, Los Angeles
Advisor : Dean Buonomano

Neural Systems and Behavior Program, August 2000
Marine Biological Laboratory, Woods Hole, MA

B.S., Symbolic Systems (Neural Systems), March 1998
Stanford University
Advisor : Thomas Wasow

Teaching Experience

Faculty Instructor: Shanghai Neuroeconomics Summer School (July 2015)
NYU-Shanghai

Faculty Instructor: First Year Marketing (MBA class, 2011-2014)
Harvard Business School

Faculty Advisor: MBA Individual Independent Projects/Fieldwork (2011-present)
Harvard Business School

Course Assistant: Consumer Behavior (MBA class, Spring 2010, 2011)
Stanford Graduate School of Business

Instructor: "The Psychology of How Your Friends Influence You" (High school outreach, April 2010)
Stanford Educational Studies Program

Course Designer/Instructor: "Lead or Follow? Perspectives from Mind and Brain on Interpersonal Influence" (MBA Alumni class, Summer 2007)
Lifelong Learning Program, Stanford Graduate School of Business

Section Leader: Behavioral and Cognitive Neuroscience (Undergraduate class, Spring 2000)
Neuroscience Interdepartmental Program, UCLA

Research Interests

Consumer behavior, consumer neuroscience, information integration, context-dependent choice, price perceptions/price psychology, uncertainty and ambiguity in decision-making.

Select Working Projects and Papers

Karmarkar UR. Presence and similarity of neighboring products influences purchase likelihood. (*in preparation*)

Karmarkar UR, Plassmann H. Consumer Neuroscience: Past, present, and future. (*under review at Organizational Research Methods*)

Karmarkar UR, Tormala Z, Rucker D. Say it with certainty: How the relationship between information and uncertainty drives consumer biases. (*in preparation*)

Karmarkar UR, Ye S, Rimeikytė V, Kastman E, Peysakhovich A, Buckholtz J. Choosing without knowing: neurobiological mechanisms for information processing in ambiguous decision-making. (*in preparation*)

Lu T, Karmarkar UR, Venkatraman V. Tradeoffs between time and value for hedonic and utilitarian experiences. (*in progress*)

Popovich D, Hamilton R, Karmarkar UR. Price image and price primacy. (*in progress*)

Journal Publications

Karmarkar UR, Shiv B, Spencer RMC. Should you sleep on it? The effects of overnight sleep on subjective preference-based choice (*in press at the Journal of Behavioral Decision Making*)

Peysakhovich A[†], Karmarkar UR[†]. Asymmetric effects of favorable and unfavorable information on decision-making under ambiguity. ([†]*authors contributed equally to this work; in press at Management Science*)

Karmarkar UR, Shiv B, Knutson B. (2015) Cost conscious? The neural and behavioral impact of price primacy on decision-making. *Journal of Marketing Research* 52(4): 467-481.

Karmarkar UR, Bollinger B. (2015) BYOB: How bringing your own shopping bags leads to treating yourself and the environment. (Lead Article) *Journal of Marketing* 79(4): 1-15.

Smidts A, Hsu M, Sanfey AG, Boksem, MA, Ebstein, RB, Huettel SA, Kable JW, Karmarkar UR, ... & Yoon, C. (2014). Advancing consumer neuroscience. *Marketing Letters*, 1-11.

- Karmarkar UR. (2011) Defining the contributions of network clock models to millisecond timing. *Front. Integr. Neurosci.* 5:41.
- Karmarkar UR, Tormala ZL. (2010) Believe me, I have no idea what I'm talking about: The effects of source certainty on consumer involvement and persuasion. *Journal of Consumer Research* 36(6):1033-49.
- Spencer RMC, Karmarkar U, Ivry, RB. (2009) Evaluating dedicated and intrinsic models of temporal encoding by varying context. *Phil. Trans. R. Soc. B.* 1525: 1853-1863.
- Karmarkar UR, Buonomano, DV. (2007) Timing in the absence of clocks: encoding time in neural network states. *Neuron.* 53(3):427-38. *(Includes cover illustration)*
- Karmarkar UR, Dan Y. (2006) Experience dependent plasticity in adult visual cortex. *Neuron.* 52(4): 577-85.
- Karmarkar UR, Buonomano DV. (2006) Different forms of homeostatic plasticity are engaged with distinct temporal profiles. *Eur. J. Neurosci.* 23(6):1575-84.
- Karmarkar U, Dan Y. (2005) One circuit, two kinds of timing. *Neuron.* 48(2):165-6.
- Karmarkar UR, Buonomano DV. (2003) Temporal specificity of perceptual learning in an auditory discrimination task. *Learning and Memory.* 10:141-147. *(Includes cover illustration)*
- Karmarkar UR, Najarian M, Buonomano DV. (2002) Mechanisms and significance of spike-timing dependent plasticity. *Biological Cybernetics.* 87:373-382.
- Karmarkar UR, Buonomano DV. (2002) A model of spike-timing dependent plasticity: One or two coincidence detectors? *J. Neurophys.* 88(1):507-13.
- Buonomano DV, Karmarkar UR. (2002) How do we tell time? *Neuroscientist.* 8(1): 42-51.
- Bookheimer SY, Dapretto M, Karmarkar U. (1999) Functional MRI in children with epilepsy. *Dev. Neurosci.* 21: 191-9.
- Aphasizhev R, Karmarkar U, Simpson L. (1998) Are tRNAs imported into the mitochondria of kinetoplastid protozoa as 5' extended precursors? *Molec. and Biochem. Parasitology.* 93: 73-80.

Chapters

- Plassmann H, Karmarkar UR. Consumer Neuroscience: Revealing meaningful relationships between brain and consumer behavior. In C Lambertson, M Norton, D Rucker (Eds.) *Cambridge Handbook of Consumer Psychology*. Cambridge University Press.
- Karmarkar US, Karmarkar UR. (2014) Customer experience and service design. In E Baglieri and US Karmarkar (Eds), *Managing Consumer Services: Factory or Theater?* (pp. 109-130). Springer.
- Knutson B, Karmarkar U. (2014). Appetite, consumption, and choice in the human brain. In SD Preston, M. Kringelbach, & B. Knutson (Ed.), *The interdisciplinary science of consumption* MIT Press.

Course Materials

Dolan RJ, Karmarkar UR. (2013) "Catalina In the Digital Age." Harvard Business School Case 514-021.

Karmarkar UR. (2011) "Note on Neuromarketing." Harvard Business School Note 512-031.

Invited Talks

- "Paper or Plastic" Course, Harvard Graduate School of Design – October 2015.
- International Women In Business Summit, Harvard University – October 2015.
- Association for Consumer Research, Doctoral Symposium – September 2015.
- Goizueta Business School, Emory University – September 2015.
- Behavioral Decision Making Group Colloquium, Anderson School of Business, UCLA – May 2015.
- Keynote: University of Chicago Brain Awareness Week – April 2015.
- Stanford Graduate School of Business – January 2015.
- Fox School of Business/Center for Neural Decision-Making, Temple University – November 2014.
- Department of Psychology, Harvard University – November 2014.
- "Paper or Plastic" Course, Harvard Graduate School of Design – October 2014.
- Program for Research In Markets and Organizations, Harvard Business School – July 2014, 2015.
- Social Sciences Librarians Bootcamp, Harvard Business School – June 2014.
- Science of Social Change Group, Kennedy School, Harvard University – April 2014.
- Trustees Meeting, Marketing Science Institute– April 2014.
- Keynote: ISAT/DARPA Workshop on Trust – March 2014.
- Society for Consumer Psychology Doctoral Student Consortium – March 2014.
- Audax Health – February 2014.
- Center for Brain Sciences, Harvard University – October 2013.
- Psychology Department, Yale University – September 2013.
- Advanced Management Program (AMP), Harvard Business School Executive Education – May 2013.
- Harvard Undergraduate Women in Business, Harvard University – March 2013.
- Ivey School of Business, University of Western Ontario – March 2013.
- Hubspot BizTalk, Hubspot Offices – February 2013.
- Women in Neuroscience Group, Harvard University – May 2012.
- Frontiers in (Marketing) Research Conference, TRC – May 2012.
- Interdisciplinary Group for Neuroscience and Society, Stanford University – May 2011.
- 50th Anniversary Event, Marketing Science Institute – April 2011.
- Rady School of Management, UCSD – April 2011.
- Kellogg School of Management, Northwestern University – November 2010.
- Rotman School of Business, University of Toronto – October 2010.
- Harvard Business School - October 2010.
- Fox School of Business, Temple University – September 2010.
- Fuqua School / Dept. of Interdisciplinary Brain Research, Duke University - February 2010.
- Knudsen Lab, Stanford University – January 2004
- Dan Lab, U.C. Berkeley – January 2004

Conference Presentations

Karmarkar UR. The impact of "display set composition" on purchase decisions. Association for Consumer Research Annual Conference, 2015.

- Karmarkar UR, Peysakhovich A. Biases in information processing in ambiguous decision-making. Association for Consumer Research Annual Conference, 2015.
- Karmarkar UR, Ye S, Rimeikytė V, Kastman E, Peysakhovich A, Buckholtz JW. Corticostriatal representation of information value during ambiguous decision-making. Society for Neuroeconomics Annual Meeting, 2015.
- Peysakhovich A, Karmarkar UR*. Biases in using information to evaluate uncertain financial prospects. Boulder Summer Conference on Consumer Financial Decision-Making, 2015. **Presenting author*
- Karmarkar UR. Choosing without knowing: biased information processing in uncertain financial decisions. Interdisciplinary Symposium on Decision Neuroscience, M.I.T. Annual Meeting 2015.
- Peysakhovich A, Karmarkar UR*. Asymmetric Effects of Favorable and Unfavorable Information on Uncertain Decision-Making. Society for Neuroeconomics, Annual Meeting 2014. **Presenting author*
- Karmarkar UR, Shiv B, Knutson B. Cost conscious? The neural and behavioral impact of price primacy on decision-making. Consumer Neuroscience Symposium, 2014.
- Peysakhovich A, Karmarkar UR*. Asymmetric Effects of Favorable and Unfavorable Information on Uncertain Decision-Making. Behavioral Decision Research in Management, 2014. **Presenting author*
- Karmarkar UR, Bollinger, BK. BYOB: How bringing your own shopping bags leads to indulging yourself and the environment. UCSD Rady Field Experimentation Conference 2014.
- Karmarkar UR*, Bollinger, BK. BYOB: How bringing your own shopping bags leads to indulging yourself and the environment. Association for Consumer Research, Annual Meeting 2013. **Presenting author and session chair.*
- Karmarkar UR. Understanding information processing in ambiguous choice. Session on “Advancing Biological Understanding of Economic and Consumer Decision-Making”, 9th Invitational Choice Symposium, 2013.
- Karmarkar UR, Bollinger BK. BYOB: How bringing your own shopping bags leads to treating yourself and the environment. Customer Insights Conference, Yale School of Management. Annual Meeting 2013.
- Karmarkar UR, Shiv B, Spencer RMC. Sleep on It? The effects of sleep on subjective preference-based choice. Interdisciplinary Symposium on Decision Neuroscience, Fox School, Temple University. Annual Meeting 2013.
- Karmarkar UR, Shiv B, Knutson, B. The Effects of Price Primacy on Decision-Making and Perceptions of Product Value. Society of Consumer Psychology, Annual Meeting, 2012.
- Karmarkar UR, Plassmann H, Shiv B, Rangel A. I Can Almost Taste It Now: Tracking the Neural Effects of Anticipatory Delays on Consumption. Association of Consumer Research, Annual Meeting, 2011.
- Karmarkar UR, Shiv B, Knutson, B. The Effects of Price Primacy on Decision-Making and Perceptions of Product Value. Association of Consumer Research, Annual Meeting, 2011.
- Karmarkar UR, Shiv B, Spencer RMC. The impact of sleep on attribute recall and choice satisfaction. Program No. 910.8. *Abstracts Viewer / Itinerary Planner*. Washington DC : Society for Neuroscience, 2010. CD-ROM.
- Karmarkar UR. Sticker Shock : The Role of Price Primacy in the Decision Process. Interdisciplinary Symposium on Decision Neuroscience, Fox School of Business, Temple University. September 2010.
- Karmarkar UR, Shiv, B, Spencer RMC. Should you sleep on it? : The effects of sleep on attribute recall and decision satisfaction. Behavioral Decision Research in Management, 2010.
- Karmarkar UR, Tormala ZL. The Dynamic Effect of Source Certainty on Consumer Involvement and Persuasion. Association of Consumer Research, Annual Meeting, 2009.
- Karmarkar UR, Spencer RMC, Shiv B. Sleep related changes in attribute recall and choice. Society for Neuroeconomics, Annual Meeting, 2009.
- Karmarkar UR, Tormala ZL. Trust Me, Maybe: The Effects of Source Certainty on Consumer Involvement and Persuasion. Yale Whitebox Advisors Doctoral Seminar, 2009.
- Karmarkar UR, Knutson, B, Shiv, B. Accept or Reject? : How task valence interacts with product information processing to alter purchase decisions. Association for Consumer Research, Annual Meeting, 2008.
- Caporale N, Han F, Karmarkar UR, Dan Y. Nonlinear integration of binocular inputs in rat visual cortex in vivo. Program No. 436.9. *Abstracts Viewer / Itinerary Planner*. Washington, DC: Society for Neuroscience, 2006. CD-ROM.
- Buonomano DV, Karmarkar UR. Encoding time: temporal objects and temporal arithmetic. Program No. 774.1. *Abstracts Viewer / Itinerary Planner*. Washington, DC: Society for Neuroscience, 2005. CD-ROM.

- Karmarkar UR, Buonomano DV. Psychophysical analysis of interval discrimination favors state-dependent models of temporal processing. Program No. 321.11. *Abstracts Viewer / Itinerary Planner*. Washington, DC: Society for Neuroscience, 2004. CD-ROM.
- Karmarkar UR, Buonomano DV. Bi-directional homeostatic plasticity of evoked inhibition and intrinsic excitability in organotypic hippocampal slices. Program No. 256.8. *Abstracts Viewer / Itinerary Planner*. Washington, DC: Society for Neuroscience, 2003. CD-ROM.
- Karmarkar UR, Buonomano DV. Activity-dependent age sensitive changes in intrinsic excitability of CA1 pyramidal neurons. Program No. 551.18. *Abstracts Viewer / Itinerary Planner*. Washington, DC: Society for Neuroscience, 2002. CD-ROM.
- Karmarkar UR, Buonomano DV. Generalization of perceptual learning in an auditory temporal discrimination task. Program No. 166.5 *Abstracts Viewer / Itinerary Planner* Washington, DC : Society for Neuroscience, 2001. CD-ROM.
- Karmarkar UR, Buonomano DV. A model of associative LTP/LTD: one or two coincidence detectors? *Society for Neuroscience Abstracts*. Society for Neuroscience, 2000. Vol.26, Part 2, p.1903.

Honors and Awards

- 2014, 2015 Invitations for appointment to ISAT (Information Science and Technology, advisory group to DARPA; *declined due to scheduling conflicts*.)
- 2006, Jaedicke Fellowship, (recognition of outstanding academic performance), Stanford Graduate School of Business.
- 2005, Postdoctoral NRSA, National Institute of Health. Grant title: Visual cortical plasticity induced by motion.
- 2005, President's Postdoctoral Fellowship, (*declined in favor of NRSA*) University of California.
- 2004, Berkeley School of Optometry Training Grant, National Eye Institute.
- 2003, Faculty Women's Club Fellowship, University of California, Los Angeles.
- 1999, National Defense Science and Engineering Graduate Fellowship, Department of Defense.
- 1998, Chancellor's Fellowship, University of California, Los Angeles.
- 1996, Howard Hughes Medical Institute Summer Fellowship, HHMI / University of California, Los Angeles.

Academic Mentoring

- Undergraduate Mentor, HBS Program for Research in Markets and Organizations (PRIMO; 2013-present)
- PhD thesis committee, Joshua Manning, Brain and Cognitive Sciences Program, M.I.T (Chairs: John D. Gabrieli and Drazen Prelec, Graduated: Spring 2015)
- PhD Thesis committee, Alexander Peysakhovich, Harvard Economics Department (Chair: Alvin E. Roth, Graduated: Fall, 2012)
- Harvard Graduate Women In Science and Engineering (HGWISE) Mentoring Program. (2012-present)
⇒ Mentor of the Year Nominee, 2013
- Pre-major Undergraduate Advisor, Stanford University. (2007-2011)
- Project Brainstorm Outreach Program, UCLA (1998-2004)
- California State Science Fair Judge, California Science Center, CA. (2002-04)
- Catalyst Mentor for Women in Science, University of California, Los Angeles. (2000-01)
- Resident Undergraduate Academic Advisor, Stanford University. (1996-1998)

Professional Societies and Service

Program Committee: Society for Neuroeconomics, 2015.

Conference Co-Organizer: Annual Interdisciplinary Symposium on Decision Neuroscience, 2014-present.

Neuroscience Roundtables, Association for Consumer Research Annual Conference, 2012, 2014, 2015.

Panel Moderator: HBS Women in Business Conference, Marketing in the Digital Era, 2014.

Panel Moderator: HBS Annual Marketing and CPG conference, panels on Social Media, Customer Insights, Neuroscience and Branding, 2011-2013.

Organizer: MIT/Harvard Decision (Neuro)Science Journal Club, 2011-2012.

Societies: Association for Consumer Research (*member, conference review board*), Society for Judgment and Decision Making, Society for Neuroeconomics, Society for Neuroscience, Harvard Mind Brain and Behavior Group, Harvard Foundations of Human Behavior Initiative.

Journal Reviewing (ad hoc unless otherwise specified): Acta Psychologica, Frontiers in Decision Neuroscience (*review editorial board*), Frontiers in Human Neuroscience, International Public Management Journal, JAMA Psychiatry, Journal of Consumer Research, Journal of Consumer Psychology, Journal of Marketing, Journal of Marketing Research, Journal of Neuroscience, Proceedings of the National Academy of Science (PNAS), Psychology and Economics, Journal of Product & Brand Management, MIS Quarterly, Neuroimage, Social Cognitive and Affective Neuroscience (SCAN).